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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/923,272

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E. Wendell Diller

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EXAMINER

CLEMENT, MICHELLE RENEE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/923,272	Applicant(s) DILLER, E. WENDELL	
	Examiner Michelle (Shelley) Clement	Art Unit 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,13-19 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) 4,7,10,13,16 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5, 6, 8, 9, 14, 15, 17, 19, 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 7/30/07 have been fully considered but they are not persuasive. In response the applicant's contention that the specification provides enablement for HOW the vents are constructed and arranged to minimize sound report, it is noted that merely stating that "[t]he positioning of the vents 30 along the length of the elongated vented gun barrel 10 preferably minimize report of the firearm 12 following discharge" does not in and of itself enable one of ordinary skill in the art to make, or position, the vents without undue experimentation. If the vents of the prior art, which correspond to applicant's claims and indeed read on applicant's claims do not perform the desired result, then it is not clear HOW applicant's can achieve the desired result without some additional structure. It is the structure of the claims that must patentably distinguish the present invention from that of the prior art. Applicant continues to argue that the vents cited in the previous actions (which read on applicant's claimed structure) do not achieve the desired "constructed and arranged to minimize sound report", if this is the case whereby the something more than the claimed structure is required to achieve the desired claimed result, applicant has not disclosed HOW this desired claimed result is achieved, The examiner is taking applicant's own statements as knowledge to reject the claims as not enabled under 35 U.S.C., since applicant asserts that the prior art of record does not accomplish the desired result and the prior art is identical to the CLAIMED structure therefore the CLAIMED structure must not accomplish the desired result. Furthermore, the declarations have been considered but are not persuasive in this matter. Applicant continues to assert that the porting of the previous art increases noise, and has submitted evidence of such, yet still asserts

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that the exact same structure that is disclosed and claimed in the present application is “configured to minimize sound”, it is not clear to the examiner how the exact same structure can have completely opposite affects. If applicant’s contentions are correct, then there must be something else about the current application and structure that applicant has not disclosed that allows the sound report to be minimized. Applicant’ repeatedly asserts that porting increases the sound report, while asserting that the porting of the current application minimizes the sound report; it is noted that porting of barrels is well known and that barrels longer than 3 feet are also well known. Furthermore, ports of various sizes are well known; if applicant’s contention is correct and this does in fact increase the noise, then the current application is not enabled for actually minimizing the sound report and not only does the claim recite a desired result, but the application is not enabled to achieve that desired result. It is not clear to the examiner if the now claimed 4 foot length, which would exclude the previously disclosed and claimed 3 foot length, barrel is what applicant considers the essential element for minimizing sound report.

2. In response to applicant’s argument that Schumacher includes additional structure not required by applicant’s invention (i.e. more than one barrel), it must be noted that Schumacher discloses the invention as claimed. The fact that it discloses additional structure not claimed is irrelevant in that applicant has not claimed the current firearm using a closed statement such as “consisting of”; the amendment to the claim reciting “one barrel” does not preclude additional barrels since the claim language “consisting of” does not limit prior art having additional structure from anticipating the current claim. With regards to applicant’s contention that the vents of Schumacher do not vent the gases directly to the surrounding atmosphere, it is noted that the vents of Schumacher are open directly to the surrounding atmosphere, in that both barrels are

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open to atmosphere so the air in the barrels is atmospheric air. It is noted that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims, the vents of Schumacher open directly to the surrounding atmosphere in that they do not open to a liquid, or into a vacuum chamber or having to go through a tube and into another holding chamber. The second barrel of Schumacher contains atmospheric air at atmospheric pressure, while applicant contends that applicant intends the claims to have a different meaning, limitations from the specification are not read into the claims. It is further noted that the prior art of record is designed in order to slowly release the high pressure gases through the vents. Applicant's arguments do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections. Applicant is merely arguing a desired result and has not shown how **the structure of** the present application differs from that of the prior art. Furthermore applicant's arguments raise issues as to enablement of the present application, since Schumacher discloses the same device as applicant **claims**, it is not clear how the device of Schumacher cannot have the same desired result as the present application. Since applicant has not disclosed any further structure or configuration in which the "vents are constructed and arranged to minimize sound report", it is not clear what such configuration would meet such a limitation. Furthermore applicant's declarations specimens all state that such vents increase the sound report, one of ordinary skill in the art would not know how to construct and arrange the vents in order to minimize sound report without undue experimentation and applicant has not disclosed how to construct and arrange them in a manner other than that disclosed by Renner in order to obtain the desired result. It is

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also noted that scattering of the sound will minimize it at certain locations, similar to the present application, Renner does not disclose or claim eliminating the sound but merely making the sound less noticeable. Any remaining arguments are moot in view of the new ground(s) of rejection.

Specification

3. The amendment filed 7/3/07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The barrel being at least 4 feet and the vents having a diameter of 3/8 inch or less (claim 22). Specifically the specification discloses the barrel being “greater than 36 inches [] preferably less than 12 feet [].” (p. 3, lines 20-23) and “[the] barrel having the length of approximately seven feet... provides a satisfactory balance to the weight and report reduction factors.” (p. 6, lines 28-29). The prior demonstrates that while applicant contemplated a barrel of the disclosed dimensions, applicant did not specifically disclose the barrel of a dimension greater than 4 feet and furthermore it would exclude the disclosed barrel of 3 feet, which applicant has disclosed works equally as well as one of any length up to 12 feet. The specification further discloses the vents specifically having a diameter of less than 1/2 inch and the original drawings show vents of 1/8 inch diameter but there is not disclosure for the vents specifically having a diameter of 3/8 inch or less.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-3, 5, 6, 8, 9, 12, 14, 15, 17, 19, and 21-23 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a firearm comprising a barrel having a breach end and a muzzle end and a plurality of vents having a size less than $\frac{1}{2}$ inch in diameter and initiating beyond twelve inches from the breach end, does not reasonably provide enablement for how the vents minimize sound report. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. It is not clear to the examiner *how* the achieve the desired affect *in view of applicant's arguments and affidavits showing that devices having the disclosed structure increase sound report* make it unclear how one of ordinary skill in the art would achieve such a desired affect without undue experimentation.

6. Claims 1-3, 5, 6, 8, 9, 12, 14, 15, 17, 19, and 21-23 rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. **How** the vents minimize sound report is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Applicant's specification merely states that the "vents preferably have a size which is less than one-half inch in diameter where the vents are constructed and arranged to minimize report of the firearm" (p. 2, lines 7-9); "One or more vents or ports preferably traverse the elongate vented gun barrel to facilitate the controlled expulsion of high-pressure gasses which occur following the discharge of the firearm. The vents or ports are preferably positioned along the length of the elongate vented gun barrel initiating beyond twelve inches or 30.48 centimeters from the breach

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end and terminating proximate to the muzzle end. Each of the vents preferably has a size dimension of less than $\frac{1}{2}$ inch or 1.27 centimeters in diameter or smaller. The positioning of the vents along the length of the elongated vented gun barrel preferably minimize report of the firearm following discharge” (p. 5, lines 1-10). Renner discloses a barrel having vents or ports positioned along the length of the barrel, the vents initiating beyond twelve inches from the breach end, the vents having a dimension of less than $\frac{1}{2}$ inch. Applicant argues that the device of Renner merely disperses sound (which according to applicant is not the same as applicant’s claimed desired result of minimizing sound report) and applicant further argues that the device of Renner will “result in greater “annoyance (noise)” (applicant’s arguments p. 6, filed 8/12/05). It is not clear to the examiner how a device identical to the device disclosed and claimed can have a different result unless applicant has not disclosed an essential or critical element to practice the invention.

7. Claims 1-3, 5, 6, 8, 9, 12, 14, 15, 17, 19, and 21-23 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The barrel being at least 4 feet and the vents having a diameter of $\frac{3}{8}$ inch or less (see ¶ above).

8. Claims 1-3, 5, 6, 8, 9, 12, 14, 15, 17, 19 and 21-23 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the structure

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that achieves the desired claimed result of minimizing sound report (i.e., *how* “the vents minimize sound report”).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 3, 5, 6, 8, 9, 14, 15, 17, 19, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schumacher (US Patent # 5,315,914). Schumacher discloses a firearm having reduced muzzle noise, the firearm comprising one elongate barrel (reference 1) having a breach end and a muzzle end and a plurality of vents (reference 4) disposed through the elongate barrel, the vents being disposed toward the muzzle end of the barrel, the vents release gas directly to the surrounding atmosphere. The barrel is formed of barrel sections (i.e. the control section, the acceleration section, etc.) (column 1, lines 30-40). The sections are fixedly secured to each other and their lengths can be chosen to be defined as the same or different. Schumacher discloses that the vent size can be altered (column 3, lines 3-7), the vents can be of the same size, and can be grouped into at least one sector. The vents are for reducing sound report.

Schumacher discloses the claimed invention, except for the vents explicitly having a size of approximately 3/8 inch in diameter or greater (or less). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the vents having a size of approximately 3/8 inch, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill

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in the art and Schumacher discloses that the vent size can be varied to change the affect of the gas pressure release. *In re Aller*, 105 USPQ 233. Schumacher discloses the claimed barrel except for expressly stating that the barrel has a length of at least 4 feet and less than 12 feet, or approximately seven feet, the vents initiating beyond twelve inches from the breech end or the specific spacing between the vents in each sector. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the barrel any desired length, since such a modification would have involved a mere change in the size of a component and a change in size is generally recognized as being within the level of ordinary skill in the art and barrels of the length specified are well known in the art. *In re Rose* 105 USPQ 237 (CCPA 1955). Thus it would have been obvious to a person of ordinary skill in the art to try the specific configuration o vents having a size less than $\frac{1}{2}$ inch in diameter being spaced within at least one sector by a distance of at least two inches between adjacent vents and vents being spaced within at least one of the sectors by a distance of at least three inches between adjacent vent, the sector having the vent spacing of at least two inches being disposed proximate to the muzzle end and the vents being spaced within at least one of the sectors by a distance of at least four inches between adjacent vents in a sector disposed proximate to the breech end, as a person with ordinary skill has a good reason to pursue the known options within his or her technical grasp. Because the firearm as claimed has the properties predicted by the prior art (i.e. quieter rifle), it would have been obvious to make the specific vent spacings and therefore it is likely the product not of innovation but of ordinary skill and common sense.

11. Claims 1, 9, 14, 15, 19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxim (US Patent # 880,386) in view of The Illustrated Book of Guns (hereinafter

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“Guns”). Maxim discloses a firearm comprising one elongate barrel having a length dimension and a plurality of vents disposed through the elongate barrel, the vents are provided farther along the barrel from the chamber. The vents open through the wall of the barrel and may be disposed in any desired manner and of such number and size to suit the requirements depending upon the size of the barrel and the quantity of the charge. The object is to provide a firearm in which the sound usually resulting is eliminated or reduced to a minimum. Although Maxim does not expressly disclose the firearm having a barrel of a least 4 feet, Guns does. At page 180, Guns teaches a known rifle having a barrel of 4 feet. Guns and Maxim are analogous art because they are from the same field of endeavor: firearms. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the 4 foot barrel as taught by Guns with the venting as disclosed by Maxim. The suggestion/motivation for doing so would have been to obtain a quieter known rifle as suggested by Maxim. Although Maxim expressly disclose the vents having the claimed size of less than 1/2 inch in diameter and the specific configuration of the vents, Maxim discloses the vents should be optimized in order to minimize the sound (p. 2, lines 90-95). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the vents any optimum size and configuration including the claimed less than 1/2 inch diameter and the specific configurations of the vents, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Thus it would have been obvious to a person of ordinary skill in the art to try the specific configuration of vents having a size less than 1/2 inch in diameter being spaced within at least one sector by a distance of at least two inches between adjacent vents and vents being spaced within at least one of the sectors by a

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distance of at least three inches between adjacent vent, the sector having the vent spacing of at least two inches being disposed proximate to the muzzle end and the vents being spaced within at least one of the sectors by a distance of at least four inches between adjacent vents in a sector disposed proximate to the breech end, as a person with ordinary skill has a good reason to pursue the known options within his or her technical grasp. Because the firearm as claimed has the properties predicted by the prior art (i.e. quieter rifle), it would have been obvious to make the specific vent spacings and therefore it is likely the product not of innovation but of ordinary skill and common sense.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle (Shelley) Clement whose telephone number is 571.272.6884. The examiner can normally be reached on Monday thru Thursday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571.272.6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michelle (Shelley) Clement/
Primary Examiner, Art Unit 3641